

# PATENT COOPERATION TREATY

# PCT

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference F44DPF003PCT	<b>FOR FURTHER ACTION</b>	See item 4 below
International application No. PCT/JP2004/001139	International filing date ( <i>day/month/year</i> ) 04 February 2004 (04.02.2004)	Priority date ( <i>day/month/year</i> )
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237		
Applicant DU PONT-MITSUI POLYCHEMICALS CO., LTD.		

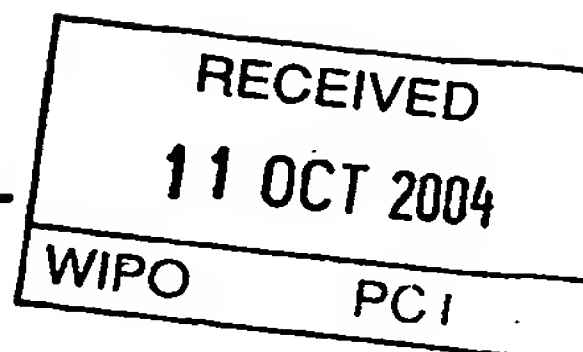
1.	This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 <i>bis</i> .1(a).																								
2.	This REPORT consists of a total of 6 sheets, including this cover sheet.  In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.																								
3.	<p>This report contains indications relating to the following items:</p> <table style="width: 100%;"> <tr> <td style="width: 10%; text-align: center;"><input checked="" type="checkbox"/></td> <td style="width: 30%;">Box No. I</td> <td style="width: 80%;">Basis of the report</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>Box No. II</td> <td>Priority</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table>	<input checked="" type="checkbox"/>	Box No. I	Basis of the report	<input checked="" type="checkbox"/>	Box No. II	Priority	<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	<input type="checkbox"/>	Box No. IV	Lack of unity of invention	<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	<input type="checkbox"/>	Box No. VI	Certain documents cited	<input checked="" type="checkbox"/>	Box No. VII	Certain defects in the international application	<input checked="" type="checkbox"/>	Box No. VIII	Certain observations on the international application
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<input checked="" type="checkbox"/>	Box No. VIII	Certain observations on the international application																							
4.	The International Bureau will communicate this report to designated Offices in accordance with Rules 44 <i>bis</i> .3(c) and 93 <i>bis</i> .1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44 <i>bis</i> .2).																								

<p style="text-align: center;">The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland</p> <p>Facsimile No. +41 22 338 82 70</p>	<p>Date of issuance of this report 07 August 2006 (07.08.2006)</p> <hr/> <p>Authorized officer  Yoshiko Kuwahara</p> <p>e-mail: pt07@wipo.int</p>
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# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

PCT



To:

see form PCT/ISA/220

## WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing  
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference  
see form PCT/ISA/220

**FOR FURTHER ACTION**  
See paragraph 2 below

International application No.  
PCT/JP2004/001139

International filing date (day/month/year)  
04.02.2004

Priority date (day/month/year)

International Patent Classification (IPC) or both national classification and IPC  
C08L23/02, C08L23/08, C08L23/06

Applicant  
DU PONT-MITSUI POLYCHEMICALS CO., LTD.

### 1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☒ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☒ Box No. VII Certain defects in the international application
- ☒ Box No. VIII Certain observations on the international application

### 2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

### 3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



European Patent Office - P.B. 5818 Patentlaan 2  
NL-2280 HV Rijswijk - Pays Bas  
Tel. +31 70 340 - 2040 Tx: 31 651 epo nl  
Fax: +31 70 340 - 3016

Authorized Officer

Clemente Garcia, R

Telephone No. +31 70 340-2242



**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/JP2004/001139

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**Box No. I Basis of the opinion**

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1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.  
☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material:  
☐ a sequence listing  
☐ table(s) related to the sequence listing
  - b. format of material:  
☐ in written format  
☐ in computer readable form
  - c. time of filing/furnishing:  
☐ contained in the international application as filed.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/JP2004/001139

**Box No. II Priority**

1. ☒ The following document has not been furnished:

☒ copy of the earlier application whose priority has been claimed (Rule 43bis.1 and 66.7(a)).

☐ translation of the earlier application whose priority has been claimed (Rule 43bis.1 and 66.7(b)).

Consequently it has not been possible to consider the validity of the priority claim. This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.

2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43bis.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.

3. Additional observations, if necessary:

**Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Yes: Claims	2
	No: Claims	1, 3-9
Inventive step (IS)	Yes: Claims	
	No: Claims	1-9
Industrial applicability (IA)	Yes: Claims	1-9
	No: Claims	

2. Citations and explanations

see separate sheet

**Box No. VII Certain defects in the international application**

The following defects in the form or contents of the international application have been noted:

see separate sheet

**Box No. VIII Certain observations on the international application**

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

ITEM V

1. Novelty; Art. 33.2 PCT

1.1. **JP-A-2002012722 (D1)** relates to non-electrostatic compositions comprising: A) a potassium ionomer, B) a copolymer of ethylene/(meth)acrylates and mono-maleate, and C) a hard polymer. The amount (C)/(A)+(B) is 70/30 to 95/5 and the degree of neutralisation is at least or 60%. The hard polymer © appears to be ABS -a polyolefin type resin- (see page 5, col. 2 of the complete Japanese document). Claims 1, 3 and 4 are not novel.

1.2. **JP-A-10310670 (D2)** is directed to antistatic compositions comprising: A) styrene resin; B) ionomer neutralised with K ions; C) a thermoplastic elastomer; and D) ethyl-methyl methacrylate copolymer. The K ion content is 0.4-4 mol/Kg. The Japanese abstract does not indicate amounts of the different components. However, tables 1 and 2 of the complete Japanese document appear to indicate that the amounts of the components of the blend are as claimed. Therefore, all the technical features of claims 1, 3, 4 are not novel.

1.3. **US-A-6,217,982 (D3)** discloses a composition for films and multilayers comprising: A) 10-40 wt/% polypropylene; B) 15-55 wt/% EPR; C) 20-60 wt/% ionomer neutralised with K ions; D) 1-5 wt/% a copolymer of ethylene and glycidyl (meth)acrylate; E) 1-15 pts wt ethylene/alkyl (meth)acrylate copolymer. One of the layers in the multilayer system is polypropylene (see claim 1; col 2, lines 51-57; col.3, lines 45-50). All the technical features of claims 1, 3-9 are contained in D3 and therefore their subject-matter is not novel.

2. Inventive step; Art. 33.2 PCT

2.1. Claim 2 is novel. The closest prior art is D1 (see description above). The distinguishing feature of claim 2 with respect to D1 is that the ionomer resin comprises two or more types of K-ionomer polymers having 1% difference in acid content. There are no comparative test on file that demonstrate that this distinguishing feature leads to technical effects. The problem to be solved is to provide an alternative antistatic composition. The solution is to use at least two K-ionomers.

2.2. **EP-A-0 419 274 (D4)** discloses antistatic blends comprising a thermoplastic polymer (polyethylene in the examples) and an ionomer comprising two different ethylene/unsaturated carboxylic acid copolymers, having 6-15 mole% and 0.5-5 mole% of unsaturated carboxylic acid respectively. The difference in acid content between them is at least 2 mole% (see claims and tables). Comparing the examples on table 1 with the examples of table 2 using only one ionomer it is clear that the combination of two K-ionomers leads to improved antistatic properties. Therefore, the skilled person trying to prepare a further antistatic composition would find a hint in D4 that the combination of two different K-ionomers having an average acid content of 10-30 % wt and a difference in acid content of at least 1 % wt would solve the problem posed. Claim 2 and the rest of the claims in general do not involve an inventive step.

#### **ITEM VII**

In order to comply with Rule 5.1 (a)(II) D1, D2 and D3 should be acknowledged in the description and briefly discussed.

#### **ITEM VIII**

Claims 8 and 9 are product claims, however they claim an intended use, therefore, their category is not clear. These claims should be reformulated as use claims (Art. 6 PCT).